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Apr 29, 2003

DOCUMENT-IDENTIFIER: US 6556992 B1

TITLE: Method and system for rating patents and other intangible assets

Brief Summary Text (5):

Patents play an important role in our economy in encouraging private investment in the development of new technologies that improve productivity and quality of life for everyone. Each year more than a quarter-million patent applications are filed in the United States Patent and Trademark Office ("PTO") resulting annually in the issuance of over a hundred fifty-thousand patents. Patent owners and applicants pay combined annual fees and costs of nearly a billion dollars (about \$6,700 per issued patent) to the PTO to prosecute and maintain their patents and applications. This does not include the additional fees and costs expended for related professional services, such as attorneys fees and drafting charges.

Brief Summary Text (7):

Because of the great importance of patents in the both the U.S. and global economies there has been continued interest in quantifying the intrinsic value of patents and their contribution to economic prosperity of the individuals or companies that hold and/or control them. Such information can be useful for a variety of purposes. For example, patent holders themselves may be interested in using such information to help guide future decision-making or for purposes of tax treatment, transfer pricing or settlement of patent license disputes. Financial advisors and investors may seek to use such information for purposes of comparative value analysis and/or to construct measures of the "fundamental value" of publicly traded companies for purposes of evaluating possible strategic acquisitions or as a guide to investment. Economists may seek to use patent valuations for purposes of economic forecasting and planning. Insurance carriers may use such valuations to set insurance policy premiums and the like for insuring intangible assets. See, e.g., U.S. Pat. No. 6,018,714, incorporated herein by reference.

Brief Summary Text (8):

However, accurate valuing of patents and other intangible intellectual property assets is a highly difficult task and requires an understanding of a broad range of legal, technical and accounting disciplines. Intellectual property assets are rarely traded in open financial markets or sold at auction. They are intangible assets that secure unique benefits to the individuals or companies that hold them and/or exploit the underlying products or technology embodying the intellectual property. In the case of patent assets, for example, this unique value may manifest itself in higher profit margins for patented products, increased market power and/or enhanced image or reputation in the industry and/or among consumers or investors. These and other characteristics of intellectual property assets make such assets extremely difficult to value.

Brief Summary Text (15):

The cost-basis approach also does not account for the possibility of evolution of products and technology over time and changing business and economic conditions. Rather, the cost-basis approach implicitly assumes a static business and economic environment, providing a fixed value based on actual costs expended at the time of the initial investment without taking into account how the value of that investment might change over time. As a result of these and other short-comings, the cost-basis approach has only limited utility as a method for accurately estimating the intrinsic economic value of patents or other intellectual property assets in real-world business environments.

Brief Summary Text (33):

The approach is not limited, however, to analyzing litigated patents. For example, fruitful comparisons may also be made between litigated patents (presumably the most valuable patents) and non-litigated patents; or between high-royalty-bearing patents and low-royalty-bearing patents; or between high-cost-basis patents and low-cost-basis patents; or between published patent applications and issued patents. The number and variety of definable patent populations having different desired qualities or characteristics capable of fruitful comparison in accordance with the invention herein is virtually unlimited. While not specifically discussed herein, those skilled in the art will also recognize that a similar approach may also be used for valuing and/or rating other intellectual property or intangible assets such as trademarks, copyrights, domain names, web sites, and the like.

Brief Summary Text (39):

In accordance with another embodiment, the invention provides an automated method for scoring or rating patents in accordance with user-defined patent metrics and/or patent populations. The automated method is initiated by a user selecting a patent, or group of patents, to be rated. A full-text computer accessible file of the patent to be rated is retrieved from a central database, such as that currently maintained by the U.S. Patent & Trademark Office at www.uspto.gov. A computer algorithm evaluates the full-text file of the patent to be rated and extracts certain selected patent metric(s), which may be predefined, user-defined, or both. Based on the selected patent metric(s), the algorithm computes a rating number or probability (e.g., between 0 and 1) corresponding to the likely presence or absence of one or more user-defined qualities of interest in the patent to be rated and/or the probability of one or more possible future events occurring relative to the patent. If desired, the rating number or probability can be further ranked against other similar ratings for patents within a selected patent population, which may be predetermined, user-defined, or both. Thus, the method in accordance with the preferred embodiment of the invention is capable of producing multiple independent ratings and/or rankings for a desired patent to be rated, each tailored to a different user-defined inquiry, such as likelihood of the patent being litigated in the future, being held invalid, likelihood of successful infringement litigation, predicted life span of the patent, relative value of the patent, etc.

Brief Summary Text (41):

All of these embodiments and obvious variations thereof are intended to be within the scope of the invention herein disclosed. These and other embodiments of the present invention will become readily apparent to those skilled in the art from the following detailed description of the preferred embodiments having reference to the attached figures, the invention not being limited to any particular preferred embodiment(s) disclosed.

Drawing Description Text (2):

Having thus summarized the overall general nature of the invention and its features and advantages, certain preferred embodiments and examples will now be described in detail having reference to the figures that follow, of which:

Drawing Description Text (9):

FIG. 7 is a graph of percentages of litigated patents found to be invalid by a federal district court according to the average age of cited U.S. patent references, illustrating the declining incidence of patent invalidity with citation age;

Detailed Description Text (2):

The utility of the present invention begins with the fundamental observation that not all intellectual property assets are created equal. In the case of patent assets, for example, two patents even in the same industry and relating to the same subject matter can command drastically different royalty rates in a free market, depending upon a variety of factors. These factors may include, for example: (1) the premium or incremental cost consumers are willing to pay for products or services embodying the patented technology; (2) the economic life of the patented technology and /or products; (3) the cost and availability of competing substitute technology and/or products; and (4) the quality of the underlying patent asset.

Detailed Description Text (5):

In its simplest form the present invention provides a statistical patent rating method and system for rating or ranking patents based on certain selected patent characteristics or "patent metrics." Such patent metrics may include any number of quantifiable parameters that directly or indirectly measure or report a quality or characteristic of a patent. Direct patent metrics measure or report those characteristics of a patent that are revealed by the patent itself, including its basic disclosure, drawings and claims, as well as the PTO record or file history relating to the patent. Specific patent metrics may include, for example and without limitation, the number of claims, number of words per claim, number of different words per claim, word density (e.g., different-words/total-words), length of patent specification, number of drawings or figures, number of cited prior art references, age of cited prior art references, number of subsequent citations received, subject matter classification and sub-classification, origin of the patent (foreign vs. domestic), payment of maintenance fees, prosecuting attorney or firm, patent examiner, examination art group, length of pendency in the PTO, claim type (i.e. method, apparatus, system), etc.

Detailed Description Text (6):

Indirect patent metrics measure or report a quality or characteristic of a patent that, while perhaps not directly revealed by the patent itself or the PTO records relating to the patent, can be determined or derived from such information (and/or other information sources) using a variety of algorithms or statistical methods including, but not limited to, the methods disclosed herein. Examples of indirect patent metrics include reported patent litigation results, published case opinions, patent licenses, marking of patented products, and the like. Indirect patent metrics may also include derived measures or measurement components such as frequency or infrequency of certain word usage relative to the general patent population or relative to a defined sub-population of patents in the same general field.

Detailed Description Text (65):

FIG. 7 is a graph 380 of percentages of litigated patents found to be invalid by a federal district court according to the average age of U.S. patent references cited therein. In particular, the graph 380 illustrates a declining incidence of patent invalidity with citation age. Curve 390 is a representative trend line having the general equation:

Detailed Description Text (85):

If desired, such overall ratings can be separately collected and tabulated for use as a handy reference source. For example, overall patent ratings can be published and updated periodically for all patents currently in force and/or for all newly issued patents published by the PTO, providing simple and useful information to those who desire to use it. Such information could also advantageously be stored on a searchable database accessible through an Internet-based web server or the like.

Detailed Description Text (100):

In another preferred embodiment, it is not necessary that a user actually know the patent number or title of the patent he or she wishes to have rated. Instead, this preferred embodiment would include a series of correlation tables which allow the user to retrieve patent numbers based on ownership, field of use, or even specific commercial products. Thus, it would be possible for a user to request reports on all patents that have been issued or assigned to a particular company in the past 5 years.

Detailed Description Text (101):

Ideally, it would also be possible for a user to request reports on all patents associated with a specific commercial product. Such product patent information could advantageously be collected and stored on a centralized, searchable computer network database or the like in order to allow users to search and obtain patent information on particular commercial products. Relevant patent marking data could be gathered either through private voluntary reporting by manufacturers of such products and/or it may be gathered through other available means, such as automated web crawlers, third-party reporting or inputting and the like. Patent marking data (e.g., the presence or absence of a patent notice on a corresponding commercial product) and/or other relevant data (e.g., sales volume, sales growth, profits, etc.) could provide additional objective metric(s) by which to rate relevant patents in accordance with the invention.

Presumably, patents that are being actively commercialized are more valuable than "paper patents" for which there is no corresponding commercial product. Optionally, the patent marking database can also include the necessary URL address information and/or the like which will allow users to hot-link directly to a third-party web page for each corresponding product and/or associated product manufacturer.

Detailed Description Text (103):

Another service that may be provided in a preferred Internet-based application of this invention is a user-updated information database. According to this embodiment, certain users and/or all users would be allowed to post information they believe is pertinent to a particular patent or group of patents. Such information might include prior art that was not cited in the patent, possible license terms, potential problems with the written description or claims of the patent, information about the inventors, information relating to sales of patented products prior to the filing date, legal opinions, related litigation, and any other information that might be relevant to the patent. The information would preferably be stored and displayed in association with each particular patent to which it is relevant. Thus, from the user's perspective each patent would, in effect, have its own bulletin board or note pad associated with it, upon which users may post relevant information. Other information could also be displayed, such as license terms available, commercial product information, other patents of interest, electronic file wrappers, hot-links to other sites, and the like.

Detailed Description Text (104):

Optionally, submitters could also provide their own rating or ranking of the patent in question, such that patents could be essentially self-rated by users. In the preferred embodiment, only qualified users (or selected patent analysts) would be allowed to post such ratings. The qualification process could be as simple as filling out a questionnaire or as thorough as an independent verification of credentials. It is also possible to employ the methodology currently used by such web sites as "epinions.com" to track the popularity and veracity of individual user-submitted information and determine which users are most trusted. Those users that are most trusted would be brought to the top of the patent information database and their authors compensated according to the number of times users accessed the information, while less-popular submitters' information would sink in rank. Users and/or analysts could also be compensated financially (or otherwise) based on the accuracy of their ratings relative to the collective rating prediction and/or relative to the occurrence of a predicted future event. This would motivate more careful analysis and more accurate ratings. See, U.S. Pat. No. 5,608,620, incorporated herein by reference, for a description of a collective prediction and forecasting method using multiple individual forecasters, which may be readily adapted and applied to the present invention as disclosed herein.

Detailed Description Text (106):

While the statistical rating method and system of the present invention is disclosed and discussed specifically in the context of rating utility patents, those skilled in the art will readily appreciate that the techniques and concepts disclosed herein may have equal applicability to rating other types of intellectual property assets, such as trademarks, copyrights, trade secrets, domain names, web sites and the like. Moreover, although this invention has been disclosed in the context of certain preferred embodiments and examples, it will be under-stood by those skilled in the art that the present invention extends beyond the specifically disclosed embodiments to other alternative embodiments and/or uses of the invention and obvious modifications and equivalents thereof. Thus, it is intended that the scope of the present invention herein disclosed should not be limited by the particular disclosed embodiments described above, but should be determined only by a fair reading of the claims that follow.

Other Reference Publication (2):

U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences. Ex parts Donnor. No. 96-2552, Decided Mar. 26, 1999. 53 USPQ2d, pp. 1699-1702.

Other Reference Publication (28):

"The Open Platform for Intellectual Property Asset Management" AURGIN products pamphlet for Aureka 7.0 software. 1999.

Other Reference Publication (36):

Reifeld, Richard A., "A Macro-economic Model Providing Patent Valuation and Patent Based Company Financial Indicators," 83 J. Pat. & Trademark Off. Xoc'y 211(Mar. 2001).

CLAIMS:

13. The method of claim 12 wherein said selected patent metrics include one or more of the following: number of claims per patent, number of words per claim, different words per claim, length of patent specification, number of drawing pages or figures, number of cited prior art references, age of cited references, number of subsequent citations received, subject matter classification and sub-classification, origin of the patent, payment of maintenance fees, name of prosecuting attorney or law firm, examination art group, or length of pendency in the PTO.

36. The method of claim 35 wherein said extracted patent metrics include one or more of the following: number of claims per patent, number of words per claim, different words per claim, length of patent specification, number of drawing pages or figures, number of cited prior art references, age of cited references, number of subsequent citations received, subject matter classification and sub-classification, origin of the patent, payment of maintenance fees, name of prosecuting attorney or law firm, examination art group, or length of pendency in the PTO.

54. The method of claim 49 wherein said intellectual property asset to be rated comprises one or more patents and wherein first and second objectively determinable characteristics comprise one or more of the following: number of claims per patent, number of words per claim, different words per claim, length of patent specification, number of drawing pages or figures, number of cited prior art references, age of cited references, number of subsequent citations received, subject matter classification and sub-classification, origin of the patent, payment of maintenance fees, name of prosecuting attorney or law firm, examination art group, or length of pendency in the PTO.

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How to Count Patents and Value Intellectual Property: The Uses of Patent Renewal and Application Data

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Pakes, Ariel
Putnam, Jonathan
Abstract

Patent counts are very imperfect measures of innovative output. This paper discusses how additional data--the number of years a patent is renewed and the number of countries in which protection for the same invention is sought--can be used to improve on counts in studies that require a measure of the extent of innovation. Simple weighting schemes are proposed, which may remove half of the noise in patent counts as a measure of innovative output. The authors describe models of the patent application and renewal processes whose parameter estimates can be used to assess the value of the proprietary rights created by the patent laws. The authors illustrate their use with estimates of how the value of patent protection would vary under alternative legal rules and renewal fees and with estimates of the international flows of returns from the patent system. Recent progress in the development of databases has increased the potential for this type of analysis. Copyright 1998 by Blackwell Publishing Ltd

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How to Count Patents and Value Intellectual Property: Uses of Patent Renewal and Application Data

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Abstract

Patent counts are very imperfect measures of innovative output. This paper discusses how additional data - the number of years a patent is renewed and the number of countries in which protection for the same invention is sought - can be used to improve on counts in studies which require a measure of the extent of innovation. A simple renewal based weighting scheme is proposed which may remove half of the noise in patent counts as a measure of innovative output. The paper also illustrates how these data can be used to estimate the value of the proprietary rights created by the patent laws. The parameters estimated in this analysis can be used to answer a series of questions related to the value of patents. We illustrate with estimates of how the value of patent protection would vary under alternative legal rules and renewal fees, and with estimates of the international flows of returns from the patent system. Recent progress in the development of databases has increased the potential for this type of analysis.

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Title: How to Count Patents and Value Intellectual Property: Uses of Patent Renewal and Application Data

Author(s): Jean O. Lanjouw, Ariel Pakes and Jonathan Putnam

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Abstract: Patent counts are very imperfect measures of innovative output. This paper discusses how additional data -- the number of years a patent is renewed and the number of countries in which protection for the same invention is sought -- can be used to improve on counts in studies that require a measure of the extent of innovation. Simple weighting schemes are proposed, which may remove half of the noise in patent counts as a measure of innovative output. We describe models of the patent application and renewal processes whose parameter estimates can be used to assess the value of the proprietary rights created by the patent laws. We illustrate their use with estimates of how the value of patent protection would vary under alternative legal rules and renewal fees and with estimates of the international flows of returns from the patent system. Recent progress in the development of data bases has increased the potential for this type of analysis.

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